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ABSTRACT

Even though reading is a complex process, cognitive psychologists generally agree that reading is an active thinking process. Four aspects of the interactive view of reading can help define this process: (1) readers use both what they know and information from the text to construct meaning; (2) readers elaborate what and how they read; (3) readers continually monitor their understanding to see if it makes sense; and (4) readers use the situational context to focus their purposes and frame their attitude toward the literacy event. The interactive model of reading can form a framework for analyzing reading difficulty. Reading difficulty occurs when one of the aspects of the reading process is excluded for an extended period of time. When there is a mismatch between the students' reading behaviors and reading instruction, readers use compensatory strategies to construct meaning. With each of the four aspects of the interactive model of reading, reasons for reading difficulty can be explained in terms of an interaction between student behaviors and classroom instruction, thus illustrating the powerful influence teachers and schooling have on remedial reading. (Two figures representing the interactive reading model and a model of reading difficulty are included; 38 references are attached.) (RS)

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The Interactive Model of Reading: Deciding How Disability Occurs

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Interactive Reading Defined

Even though reading is a complex process, cognitive psychologists generally agree that reading is an active thinking process. Four aspects can help define this process. First, readers use both what they know (reader-based inferencing) and information from the text (text-based inferencing) to construct meaning. Readers anticipate what the text will say by thinking about what they know. They use this hypothesis as well as the textual information to actively construct meaning (Pearson & Johnson, 1978). This process is interactive because a pattern is synthesized based on information provided simultaneously from several knowledge sources (Stanovich, 1986). These knowledge sources such as the features and meaning of words, sentence organization and the overall textual organization are used in combination with readers' prior grammatical and topic knowledge to facilitate understanding (Stanovich, 1986).

A second aspect of the reading process is that readers elaborate what and how they read (McNeil, 1987; Wong, 1982). As they read they say "Hey, I can remember this because it is like. . ." They make connections that help them remember and

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interpret what and how they are reading. These new connections become part of what readers know. Thus, reading becomes a major tool for acquiring new information. Through extensive reading students not only allocate attention to comprehending the text but also to elaborating the strategies they use to construct meaning.

A third aspect is that readers continually monitor their understanding to see if it makes sense (Baker and Brown, 1984). When their interpretation does not make sense, a buzzer goes off in their heads and they vary their strategies to remove difficulties in interpreting meaning. Readers continually check their understanding through self-questions that direct the use of fix-up strategies. Then they reread to remedy their misunderstanding or check their own prior knowledge.

Likewise, a fourth aspect is that readers use the situational context to focus their purposes and frame their attitude toward the literacy event (Harste, Woodward and Burke, 1984; Winograd and Smith, 1987). Different situations affect what readers perceive as important, how information sources are combined, what is elaborated, how the text is monitored, and the students' perceptions about the literacy event.

The model below shows these four aspects of the reading process as they continuously interact while readers construct meaning.

Insert Figure 1 here

Effective readers coordinate sources of information (personal knowledge and the text), elaborate meaning and strategies, check their understanding (revising when necessary), and use the context to focus their reading. When readers experience difficulty, they rely on their strengths to remedy these difficulties thus eliminating a need to use strategies interactively. However, when any one of these aspects is excluded for a period of time, students may fail to develop as effective readers.

How Reading Disability Occurs

Basically, all readers use their strengths to solve problems in text interpretation, however, sometimes these strengths result in compensatory behaviors that inhibit rather than enhance meaning construction (Stanovich, 1986). When readers encounter difficulty, they shift away from a deficit and use compensatory behaviors. If readers habitually use these compensatory behaviors, their reading becomes ineffective. The interactive model of reading can form a framework for analyzing reading difficulty. Reading difficulty occurs when students 1) frequently overrely on a single information source rather than combining sources, 2) continuously read difficult text limiting elaboration of content and strategies, 3) habitually read without monitoring meaning resulting in passive reading, and 4) define the

context of reading as a failure situation.

Insert Figure 2 here

Reading difficulty occurs when one of these aspects is excluded for an extended period of time. When there is a mismatch between the students' reading behaviors and reading instruction, readers use compensatory strategies to construct meaning. The problem does not lie solely within the student; but is impacted by the instruction they receive. This instruction can enhance or inhibit the reading performance of problem readers.

Failure to Coordinate Sources of Information. At the onset of reading, students learn to coordinate sources of information. Often, however, remedial readers experience a deficit in either a skill such as phonic knowledge or an ability such as visual memory that causes them to shift away from an information source (Stanovich, 1986). "Poor beginning readers. . .seem to rely on one available source of information rather than integrating all available cues" (Allington, 1984b, p. 847). These readers experience difficulty because they do not coordinate sources of information. For example, readers who have difficulty with phonic knowledge may rely on reader-based strategies rather than decoding print. Initially, the strategy of relying on reader-based inferencing is effective, particularly when

readers have a wealth of knowledge about a topic. However, as these readers encounter more unfamiliar topics and avoid using text-based strategies, their text interpretation becomes increasingly muddled. Thus, their overreliance on reader inferencing (their strength) becomes a weakness.

For example, Andy entered first grade with poor phonemic awareness as many potential poor readers do (Juel, 1988). This particular weakness inhibited his understanding of the phonetic system which affected his learning in the basal reader program that was used in the classroom. Therefore, Andy used his strength of background knowledge to figure out words. When this didn't work, he made up the text as he read by looking at the pictures. This problem is not major, but if he continues to use his own knowledge without checking the words in the text, his reading will become less accurate and he will not progress. On the other hand, Kris, a text-based reader, learned phonics easily and, like some problem readers (Allington, 1984b, Paris & Myers, 1981), thought reading was accurately calling a string of words. She believed the meaning was found in the text but as textual information became more complex and needed interpretation, she found that she could no longer simply repeat a string of textual facts to indicate her understanding. This problem is not major, but if she continues to read text without constructing meaning, her reading will not progress.

In <u>ineffective</u> programs, Andy and Kris don't receive

instruction that shows them how to integrate information sources. In many special programs the "whole thrust is to identify weaknesses and concentrate on problems instead of focusing on strengths and consciously supporting those strengths" (Martin, 1988). Teachers focus on isolated skills building on a deficit in a decontextualized instructional setting. Without anyone suspecting (after all they have reached criterion on the isolated skill assessments), Andy and Kris are asked to read texts that are too difficult. When they read texts that are too difficult, their reading problems become more complex and they cease to elaborate content or strategies.

Failure to Elaborate Content and Strategies. When readers are placed in difficult texts for a majority of instructional time, they expend their energy constructing a hazy model of meaning and have no experience elaborating the content or the strategies they use to construct meaning. Remedial readers are often placed in materials beyond their reading level (Gambrell, Wilson and Gnatt, 1981; Juel, 1988). When this happens, the gap between what readers know and what they are asked to read widens and they cannot elaborate either what or how they are reading. Instead, they increasingly rely on their strengths making sense of text only infrequently.

For example, Andy does elaborate content adding some new information to his background knowledge. But his inattention to the words on the page and the increased difficulty of the

text, causes Andy, like other similar readers (Juel, 1988), to cease thinking about words and he therefore does not elaborate a system for decoding new words. His background knowledge is the only source of information that he uses to remedy problems in text interpretation. Rather than integrating information sources and elaborating how these sources are used in combination, Andy continues using ineffective strategies wondering how other students read with such ease. His reading becomes slower and less accurate, thus reading word-by-word like other poor readers (Allington, 1984b, Paris & Myers, 1981).

For readers like Andy and Kris, the reciprocal relationship among cognitive skills that occurs for effective readers is inhibited because they allocate thinking solely to hazy meaning construction. In one study, researchers found that measures of phonological awareness, decoding speed, vocabulary, listening comprehension, and abstract problem-solving were only weakly correlated to reading performance in the first grade; however, these abilities were highly correlated to reading performance by fifth grade (Stanovich, Cunningham & Feeman, 1984). Similar trends were reported in a longitudinal study by Juel (1988). With her group of poor readers, the impact of listening comprehension, phonemic awareness, and word recognition on reading performance increased during the first four years of schooling. According to Stanovich (1986), good readers process the

graphic information so automatically, that comprehension is enhanced because these readers are free to attend to higher levels of the comprehension process, poor readers who are word-bound have less attention available for higher levels of the comprehension process like elaborating the content or their strategies for meaning construction. As students progress through reading development, the interaction between the text and what they know becomes rapid and automatic, thus allowing readers to use more of their thinking capacity to elaborate the relationships between textual meaning and personal knowledge. They also allocate attention to comprehending the topic as well as the strategies for meaning construction. In essence, fluency allows students to elaborate the relationships in textual meaning and the strategies they use to derive this meaning. When remedial readers have extended reading experiences where they cannot read fluently, they become unaware of the strategies they use and, in fact, are unable to elaborate vocabulary meaning which would, in turn, increase contextual knowledge and facilitate word identification (Stanovich, 1986). Reading problems, then become more complex when the difference between what poor readers can read with comprehension and what they are asked to read in the classroom is so great they cannot make sense of their reading. These students solve this problem by overrelying on their strength and failing to integrate information sources or elaborate strategies,

therefore, they become increasingly less active because nothing makes sense.

In the approach to classroom reading instruction that has been prevalent in the last decade, teachers have overrelied on workbook pages to reinforce reading skills at the expense of reading extended passages and whole stories (Anderson, et. al. 1985). In fact, Allington (1984a) found that children in high reading groups read 10 times as many word as children in low reading groups. In this study, first graders in low reading groups read silently a total of 60 words during the five-day sample period. That is only 12 words a day. No one can elaborate meaning and strategies when they read only 12 words a day. Likewise, Juel (1988) found that the poor readers read less than half as many words each year as the good readers. These poor readers also read text at the 80% accuracy rate while the good reader seldom encountered words they could not read. Perfetti (1985, p. 248) explains this phenomena "The low-achieving reader starts out behind. . .and falls farther behind as his reading experiences fail to build the rich and redundant network that the high achieving reader has." This problem, the need for extended practice, is coupled with an increasing passive response to reading situations.

Failure to Monitor Meaning and Strategies. When students rely on their strength and cease to elaborate their strategies, they develop a less active stance toward text.

Their continual failure precludes the spontaneous use of reading strategies. Subsequently, the infrequent use of strategic reading results in a set of disorganized strategies and failure to check reading understanding (Bristow, 1985). They tend to lack strategies that good readers use naturally (Davey, 1989; Johnston & Winograd, 1985; Paris & Myers, 1981) and remain "unconvinced of the importance or necessity of using strategies" even when demonstrated (Paris & Oka, 1989, p. 34). When asked questions, they merely respond with, "I don't know." They are not really lazy or defiant; they really don't know how to remedy the problem situation. They did read the text and a buzzer went off in their head telling them what they were reading was not making sense, but they didn't know how to remedy this situation. Instead, they "tend to reproduce inappropriate text segments or provide no response" (Davey, 1989, p. 696), change their predictions less often relying on their initial prediction (Maria and MacGinitie, 1982), and keep this prediction even when it is no longer supported by the text (Baker and Brown, 1984). Since these readers have little experience constructing meaning, they passively read words without actively questioning their understanding. Likewise, these passive behaviors have been reported during oral reading. Poor readers generally make fewer self-corrections than good readers (D'Angelo, 1982). According to Clay (1985), proficient readers typically correct those errors that change

meaning but pay little attention to those oral reading errors that do not change meaning. Remedial readers, however, do not distinguish between their errors that affect meaning and those that do not because they read without checking meaning. Thus, in both comprehension and oral reading, remedial readers have been found to be a less actively engage in reading.

In the skills approach that has dominated education for the last two decades, mastery of specific skill in tasks that involve small segments of language has been the norm (Anderson, et.al., 1985). Content of the remedial program has been specific skill packets and workbooks where progress is monitored by right and wrong answers to questions requiring one word responses that measure one skill at a time. When reading is reduced to mastering a skill that readers lack, they increasingly define the context of reading as a failure situation. Thus, their passive reading behavior magnifies and they cease to try when completing school tasks that require reading.

Failure to Appropriately Interpret the Situational Context.

Continual failure during literacy events leads students to overrely on their strength, cease to elaborate the content and their strategies, become passive toward their own meaning construction and, finally, define all literacy events as failure situations resulting in decreased effort. They attribute their failure to lack of ability which "they

believe is a fixed entity. . .and which they have little of" (Johnston & Winograd, 1985, p. 283). Because we have focused on skills that students' didn't have, students have judged themselves as not able to learn to read. They are generally unaware of their own strategy use, and think to themselves, "I will not try, because if I try and fail again, I am admitting I am dumb." They are not really belligerent, but the presupposition that they will fail leaves them no alternative but to define the context of all reading situations as failure situations reducing their self-confidence (Bristow, 1985; Johnston & Winograd, 1985). Manipulating both success and failure in reading experiences, Butkowsky and Willows (1980) found that poor readers in the fifth grade were less likely to attribute success to ability, and more likely to attribute it to luck or task ease than were the better readers. Thus, readers who have had prolonged difficulty seem to exhibit an eroding motivation in achievement situations that increases their probable failure. This repeated failure coupled with criticisms from parents and teachers contribute to the continued belief that "I'm not able to learn to read", thus, decreasing their motivation.

Studies of teacher-student interactions show that teachers do treat remedial readers differently from achieving students. For instance, when listening to children read teachers often interrupt poor readers at the point of error and prompt with word-level prompts while letting more

achieving students continue to the end of the sentence (Allington, 1980). Likewise, low achieving students receive a higher percentage of literal level questions while their achieving counterparts are asked inferential and critical questions (Pearson, 1983). Furthermore, teachers often give remedial readers the answer or ask more achieving students rather than giving prompts or hints as to how the student might answer the question (Johnston & Winograd, 1985). Many are excused from difficult assignments and placed in remedial or special classes where they cannot interact with achieving peers (Will, 1986). These situations contribute to the remedial readers' growing feeling that, when reading, they will fail.

For example, suppose Andy and Kris still haven't received the necessary kind of instruction they need, thus their presupposition that "I can't read" indicating that reading is a stable ability rather than a strategic process affects all their literacy events. No longer can simply changing the text level, adjusting the technique or adding strategy instruction change this negative attribution toward literacy, but instruction must begin with focusing on redefining the context of reading and reading ability for both Andy and Kris. Children, like Andy and Kris, "may never persist long enough at a task to discover that success may, in fact, be possible, . . . (they) may never spontaneously discover that they do possess the capacity to achieve

outcomes that exceed their expectations" (Butkowsky & Willows, 1980, p. 419).

Because we have focused on skills that students' didn't have and have repeatedly tested these skills on criterion referenced tests, these remedial readers judged themselves as poor readers, reducing their motivation. They think to themselves, "When reading is doing a skill that I don't have the ability to do, then how can I believe that reading is a situation where I can succeed?" Likewise, the use of norm-referenced evaluation by teachers tends to reward those students with above-average ability. The lower ability students try hard, but they do not meet the standard created by those students who learn easily and quickly. Soon students with slightly below average ability on school related tasks realize that a high level effort is not a guarantee of success. Some of these students, many of whom are remedial readers, decide that if they cannot learn to read then they can avoid a sense of failure and regain their self-worth by simply not trying. They appear indifferent toward their own learning and teachers label them unmotivated. According to Raffini (1988), "they are highly motivated to protect their sense of self-worth" in the face of failure. Because of these two school situations and the remedial readers' continual failure, Andy and Kris develop a fuzzy notion of both success and failure. They attribute their failure to being dumb, a characteristic that cannot be

changed, and they cease to expend effort. When they do succeed, they maintain that it was because of the easy materials or the teachers' effort rather than their own.

Summary

In this paper, four aspects of the interactive view of reading were explained along with the compensatory behaviors remedial readers use. With each of these four aspects, reasons for reading difficulty were explained in terms of an interaction between student behaviors and classroom instruction, thus illustrating the powerful influence teachers and schooling have on remedial reading.

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Figure 1

INTERACTIVE READING

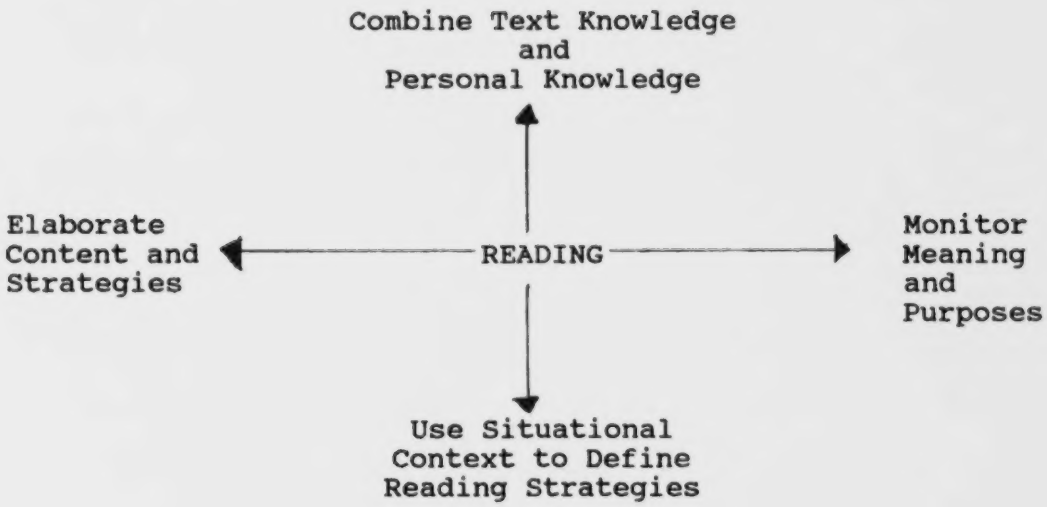

Figure 2

READING DIFFICULTY